R E P O R T R E S U M E S

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THE EFFECTIVENESS OF THREE MOTIVATIONAL METHODS (MEDIA, SUBJECT MATTER, AND COMBINATION MOTIVATIONS) IN AN ART PROGRAM IN THE ELEMENTARY GRADES.

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THE MAJOR OBJECTIVE WAS TO DETERMINE THE RELATIVE EFFECTIVENESS OF THREE METHODOLOGICAL APPROACHES TO THE TEACHING OF ART IN THE ELEMENTARY SCHOOL. QUESTIONNAIRES ASKING HOW MUCH PERSONAL INVOLVEMENT, ART QUALITY, UNIQUENESS, AND PRIDE WERE GENERATED BY EACH MOTIVATIONAL TREATMENT WERE COMPLETED BY OBSERVERS AND ART TEACHERS FOR 90 LESSONS. EACH GRADE LEVEL RECEIVED FIVE SERIES OF A WIDE VARIETY OF ART MATERIALS. EACH SERIES USED ALL THREE TREATMENTS. FOR EXAMPLE, IN A JEWELRY SERIES, THE SUBJECT MOTIVATION WAS ANIMAL CLAY PINS, THE MEDIA MOTIVATION WAS PASTE JEWELRY, AND THE COMBINATION MOTIVATION WAS PLANT FORMS IN CLOISONNE. ANALYSES OF VARIANCE SHOWED SUBJECT AND COMBINATION MOTIVATIONS TO BE MORE EFFECTIVE ON THE STUDENT INVOLVEMENT CRITERIA, AND COMBINATION MOTIVATIONS TO BE MORE EFFECTIVE ON THE ART QUALITY CRITERIA. IN SIXTH GRADE, COMBINATION MOTIVATION WAS MOST EFFECTIVE, SUBJECT SECOND, AND MEDIA LEAST EFFECTIVE (THE AGE OF REALISM). IN FOURTH AND FIFTH GRADES, COMBINATION WAS BEST, MEDIA SECOND, AND SUBJECT MOTIVATION LEAST EFFECTIVE (THE AGE OF TINKERING). IN SECOND AND THIRD GRADES, SUBJECT MOTIVATION WAS MOST EFFECTIVE (AN AGE OF SYMBOLS). NO DIFFERENCE WAS FOUND AT FIRST GRADE. (TC)

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FINAL REPORT

Project No. S-388

Grant No. OE-6-10-052

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Contract No. OE-6-10-052

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THE EFFECTIVENESS OF THREE MOTIVATIONAL METHODS

(Media, Subject Matter, and Combination Motivations)

IN AN ART PROGRAM IN THE ELEMENTARY GRADES.

I. INTRODUCTION

A. Problem. How can elementary school children in art class be most effectively motivated by the teacher? Should the teacher usually give a combination motivation--one which contains both subject matter ideas and a discussion of the properties of the media? Is one or the other emphasis more important at certain grade levels; for example, do sixth graders need more media motivation than first graders? Irregardless of grade level, is one type to be preferred to reach certain teaching goals? At which grade levels do students respond more enthusiastically to subject matter motivations? This investigation attempts to shed some light on questions such as these.

B. Background. To some extent, for the purposes of study, these two methods, subject vs. media, have been artificially dichotomized. Certainly most art teachers use a blend of the two methods, yet, on visiting classrooms, one can also see this teacher relying strongly on theme motivations, another employing material motivation. While the advocates of both philosophies recognize, and, to greater or lesser degrees, make use of the other, nevertheless, two approaches to motivation stand out. These two approaches bear some resemblance to the schism among aestheticians between the expressionists, such as Croce and Collingwood, and the formalists, such as Bell and Fry. Viktor Lowenfeld was an art educator who emphasized subject matter motivations, especially those dealing with the child's experiences. These motivations revitalized past experiences of the child and made him more sensitive to his environment. "...the individual's sensitivity toward perceptual, intellectual, and emotional experiences is deepened and integrated into a harmoniously organized whole."

On the other hand, the experimentation-oriented media motivation stresses the rich and varied manipulative possibilities of the media. This approach, rather than emphasizing subject matter, themes, and past experiences

as motivation, stresses the creative growth achieved through the experience of manipulating the media itself. Ivan Johnson expressed this philosophy as follows: "Creative action is dependent on a permissive atmosphere in which opportunity prevails to manipulate, explore, evaluate, and achieve in a fluid process a solution that is self-satisfying." Victor D'Amico, inclined toward media motivation, criticized over-emphasis on subject-child-experience as follows: In the new education the opposite is too often true--all the emphasis is put on the child as an individual, but the motivation, processes and tools for developing individuality remain vague and confused."

With these divergent philosophies in mind, this study attempts to evaluate the relative merits of each approach. The criteria used in this study are based upon the amount of interest, attention span, and involvement generated in the pupils by these respective methods and upon amount of aesthetic quality and design quality in the works produced.

C. Review of Related Art Education Research. Basic to the area of art education in the public schools is the premise that motivation becomes a major factor in the growth and aesthetic output of the child. In surveying the field of art education research, few empirical studies were found which dealt with questions of motivational effectiveness. Research has shown that motivation of various types tends to increase aesthetic growth. Empirical studies in the field such as Lansing's and Kendrick's showed that motivation in art lessons does effect the end product in terms of aesthetic growth; discussion motivation, e.g., "we do chores," was most effective, field trips preceeded by discussion were next, and mechanical audio-visual motivations were least effective. McVitty's study showed that motivations involving strong interaction and participation between student and teacher were most effective in aesthetic growth.

Burkhart reported that both subject matter "if" questions and media "how" questions are necessary for art gains. He finds suppositional "if" questions necessary for originality of idea; the media "how" questions are necessary to develop preparedness.

The differences in motivational effectiveness brought about by greater physical and mental maturity have been investigated by Gaitskell and Douglas. Gaitskell reported that her research showed that kindergarten children in the manipulative stage worked best without teacher motivation. She also reported that kindergarten children in the later symbolic stage soon exhaust their own ideas and require some motivation. Douglas reported that the aesthetic growth of the second graders was greater when they chose their own subject matter, although their frustrations heightened under free theme choice (our findings have corroborated both of her conclusions).

The value of experiences in varied media is supported by Heberholz's study of second graders which showed that those who were exposed to clay modeling were able to draw better figures. However, the research of Mattil, Beittel, and others showed that while student satisfaction was greater using varied media, their aesthetic growth was not as great.

D. Objectives. The major objective underlying this study was to determine the relative effectiveness of three methodological approaches to the teaching of art in the elementary school. One of the motivational techniques used was subject matter motivation. Writers such as Lowenfeld, Keiler, Dewey, Barkan, and Knudsen feel that one of the most valid forms of art motivation in the elementary grades is that which is based on the past life experiences of the participating child. Art then becomes an expression and vital means of interpreting one's self in conjunction with one's environment through subject matter motivation.

Contrasted to the subject motivated art lesson is the media motivated art lesson, which finds its basis in the rich, beautiful, and varied manipulative possibilities offered by the media. Writers such as Hoover, Johnson, D'Amico, and Erdt are not at all opposed to subject motivation, but, indicate in their writings a distinct leaning toward media motivation. These educators tend to feel that the experimentation and direction with the plastic qualities of the art media becomes a major important motivational force for art.

II. METHOD

A. The Measuring Instrument. The goals of this study are to investigate the effectiveness of these methods in the elementary grades. Several criteria will be used; some emphasizing personal involvement, others emphasizing art quality.

The personal involvement criteria include amount of involvement, pride, intensity of working behavior at 10, 20, and 30 minutes, amount of intellectual and emotional expression.

The art quality criteria include use of media, use of design principles, overall art quality, development of technical proficiency. (see attached instruments in the appendix).

B. The Motivational Treatments. One of the most creative aspects of the study was the devising of motivations which were primarily subject matter, media, or combination types. In order to control for the variation of materials, the teacher presented all three types of motivations using similar materials. (The lessons were presented in differing orders for each series.)

An india ink and water color series given in a sixth grade will serve as an example.

1. Media Motivation--ink line on wet and dry paper, water color blending on wet and dry paper.
2. Subject Matter Motivation--three ghost stories from Famous Ghosts in American Homes were read, from which the children picked one to illustrate with ink and water colors.
3. Combination Motivation--three Greek myths were read for the theme motivation; for the media motivation, students painted on wet paper with ink and water color, let it dry, then with crow quill pens, delineated shapes and figures.

The following descriptions give the reader a fuller sense of the manner in which the three types of motivations were used with the same materials. (In order to control for the extraneous variable of different materials, each material was presented in all three types of motivations.)

TITLES OF SOME OF THE LESSONS PRESENTED

SERIES	GRADE	SUBJECT MATTER MOTIVATION	MEDIA MOTIVATION	COMBINATION MOTIVATION
WATER-COLOR	6	memory painting of model	dry brush, chizroscuro	microscope slides, analogous colors
CLAY SCULPTURE	6	clay jewelry, insect themes	furnace cement	Rennaissance theme, bas relief
WATER-COLOR	5	Visitors to our class	wet into dry, dry technique	Rennaissance Fresco painting
CRAYON	4	family portrait glued to masonite, saw into jigsaw puzzle	limited palate	playground action, value contrast
JEWELRY (GLASS)	4	Clay Glazed Animal Pins	Egyptian Paste jewelry	Plant life Cloissonne; enamel on copper
WATER-COLOR	4	Famous Ghosts	Classical watercolor technique	musical instrument still-life, Dry brush

The instructors who presented the lessons were expert teachers with a great amount of experience. Mr. Pete J. Carr, who presented third, fourth, fifth, and sixth grade lessons is Assistant Professor of Art and Supervisor of Elementary Art, Burris Laboratory School, Ball State University; he has had 15 years of public school teaching experience. Mr. Gerry Mendelson, who presented first, second, and sixth grade lessons is currently on the faculty of the Department of Art Education, Indiana University, has been Assistant Professor of Art at Ball State University, and has had many years of public school teaching experience.

Each lesson presented was evaluated by approximately four observers who were in the classroom watching the students. The observers, who were college juniors preparing to be elementary and art teachers, judged the students on how intensely they were working after 10, 20, and 30 minutes, amount of interest, pride, etc. The art teacher judged his own lesson on questions of an

aesthetic nature, which the observers would have found difficult to answer--such as amount of emotional and intellectual expression, use of materials, use of design principles, art quality, and degree to which the lesson fulfilled the teacher's educational objectives.

C. Design. 525 observations were made, of 87 lessons, in 19 classes at two schools. The fourth and fifth grade samples had to be combined. Approximately 100 observations on 17 lessons in 4 classes were collected at each grade level.

D. Analysis. The data was analyzed by one- and two-way analyses of variance for each of the 19 questions for each grade level. A total of 140 one-way analyses of variance were made, plus 19 two-way analyses of variance. Also, four chi square were done on the take-home products criterion.

III. RESULTS

A. Presentation of Table of Results. The table presents the statistical results of the study. The meaning of these numbers follows immediately in sections B, C, D, and E. Reading down the left margin, one sees the 17 criteria: percent of the class working at ten minutes, 20 minutes, need for no help, good student questions, involvement, uniqueness, etc. Scanning across the top margin, one sees the results for each grade level, followed by the average across grade levels. Beneath the grade level appears the abbreviations med, com, and sub; these stand for media motivation, combination motivation, and subject matter motivation. The mean for three motivations follows.

F1 is the result of the analysis of variance on the methods. If this number approached the .05 level of significance (4.0 was usually significant at .05), then, another analysis of variance was made on only the best treatment vs. the worst treatment. This score is called F2. One asterisk following a score means it was significant at the .05 level; two asterisks mean it was significant at the .01 level.

B. 6th Grade-Combination Best, Media Worst. A very strong preference for combination motivation over media motivation was revealed in the sixth grade. The eight measures which clearly favored one motivation all showed the combination motivation to be most effective. The eight measures which showed one motivation to be less effective all showed media motivation to be least effective at this grade level. Combination motivation was shown to be most effective on the following measures:

Children were working more intensely at 30 minutes (F=3.3*) (see footnote) and had more emotional expression (3.6*). The children's art products showed more uniqueness,

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*The F results of the analyses of variance are reported in parentheses after the finding. If it is significant at the .05 level one asterisk follows it; if significant at the .01 level two asterisks follow it; F scores between the most and least effective treatments are given.

Observer's Sheet	GRADE 1						GRADE 2						GRADE 3					
	Med.	Com.	Sub.	Mean	F_1	F_2	Med.	Com.	Sub.	Mean	F_1	F_2	Med.	Com.	Sub.	Mean	F_1	F_2
10 min.	8.1	9.7	9.3	9.1	3.0	4.3*	8.6	8.7	9.6	8.9	.8		8.6	7.5	8.9	8.4	6.7**	14.4**
20 min.	6.9	7.3	7.6	7.5	.1		8.2	7.7	3.2	8.0	2.1	5.8*	6.6	7.8	3.3	7.8	6.3**	10.8**
30 min.	6.9	6.4	6.2	6.3	.0		7.5	6.3	8.5	7.5	2.6	7.4*	4.5	7.2	7.7	6.4	3.7*	5.7*
Need for no help	6.8	7.5	6.4	6.9	1.4	2.1	6.5	5.8	6.0	6.1	.5		6.4	5.5	5.0	5.7	1.1	
Need for no help in Subject	8.4	6.6	7.5	7.5	3.7*	6.4*	7.4	6.0	7.4	6.9	1.5		7.3	7.6	7.3	7.6	.1	
Need for no help in Media	8.5	8.0	7.4	7.9	1.3		5.9	6.7	6.7	6.4	.7		7.0	6.2	7.2	6.8	.7	
Study Questions	1.6	2.3	3.0	2.5	5.3*		3.5	3.3	3.7	3.5	.1		2.2	2.4	2.7	2.4	.2	
Involvement	6.6	6.5	6.5	6.5	.0		7.2	6.5	7.8	7.2	2.2	4.5*	4.8	7.3	7.3	6.9	5.3**	8.6**
Uniqueness	5.3	5.0	5.1	5.1	.1		5.8	6.6	7.4	6.7	6.7		5.4	4.2	5.4	4.9	.5	
Pride	5.2	5.7	5.7	5.6	.5		6.4	6.3	7.4	6.7	1.9		5.8	6.2	6.7	6.2	1.0	
Teacher's Sheet																		
Intellectualize	2.7	6.0	6.7	5.1	7.3*	11.0**	2.3	5.3	7.7	15.4	8.2**	20.**	4.3	5.5	5.0	4.9	.4	
Emotionalize	5.3	4.3	4.7	4.8	.5		7.0	5.7	6.0	6.2	.8		5.0	6.0	4.7	5.2	.1	
Art Quality	5.3	4.3	4.7	4.8	.6		7.0	5.7	6.0	6.2	1.9		5.0	6.0	4.7	5.2	.1	
Media Use	5.7	5.3	5.3	5.4	.3		5.7	5.7	6.3	5.9	.7		6.0	6.0	6.3	6.1	.0	
Design	5.0	5.3	5.3	5.2	.5		5.3	6.0	5.3	5.5	.3		4.0	4.5	5.3	4.9	.3	
Technique	5.7	5.0	4.7	5.1	1.4		5.0	5.3	5.3	5.2	.2		5.0	4.5	4.3	4.6	.1	
Teacher's Objectives	5.3	5.7	5.7	5.5	.2		5.3	6.0	5.7	5.7	.6		3.3	5.0	4.3	4.2	.2	

Observer's Sheet	GRADE 4 & 5						GRADE 6						GRADE 1-6 Ave.			
	Med.	Com.	Sub.	Mean	F_1	F_2	Med.	Com.	Sub.	Mean	F_1	F_2	Med.	Com.	Sub.	
10 min.	8.4	8.6	8.2	8.4	.2		7.9	8.3	7.7	7.9	.5		8.3	8.6	8.7	
20 min.	9.3	9.5	8.1	9.0	7.2**	10.7**	7.8	8.2	8.1	8.0	.2		7.7	8.9	8.4	
30 min.	3.9	9.1	7.7	8.6	3.3	4.5*	7.1	8.0	7.3	7.5	1.8	3.3	6.9	7.3	7.6	
Need for no help	5.7	6.3	6.2	6.1	.4		6.4	7.1	7.3	6.9	2.4		6.4	6.4	6.2	
Need for no help in Subject	6.3	6.3	7.4	6.8	1.0		6.6	7.7	7.7	7.3	2.6		7.3	6.9	7.5	
Need for no help in Media	6.5	7.5	7.1	7.0	.9		6.9	7.7	7.9	7.4	2.3		6.8	7.2	7.2	
tudy uestions	4.7	4.1	4.0	4.3	.4		3.4	2.8	3.1	3.1	.9		3.1	3.1	3.3	
Involve-ment	6.4	7.6	7.4	7.3	2.3		6.4	6.4	6.6	6.4	.2		6.4	6.9	7.1	
Uniqueness	6.3	5.9	6.8	6.3	.4		6.2	7.0	6.8	6.6	.4		5.8	5.2	6.3	
Pride	5.7	7.0	6.7	6.4	3.2*		5.1	5.7	5.4	5.8	1.6	2.5	5.6	6.3	6.4	
Teacher's Sheet																
Intellect-ualize	6.5	6.8	4.2	5.9	3.5	6.5*	4.5	6.6	7.5	6.2	5.2*	4.2*	4.1	6.1	6.2	
Emotion-alize	6.3	6.0	5.3	5.9	.4		4.7	6.4	6.1	5.7	2.0	3.6	5.7	5.7	5.4	
Art Quality	6.3	6.0	5.3	5.8	.4		4.7	6.4	6.1	5.3	2.0	4.1*	5.6	5.7	5.4	
Media Use	6.5	7.3	4.3	6.0	3.3*	8.3*	6.3	7.3	6.3	6.7	1.0	2.5	6.0	6.1	5.7	
Design	6.0	6.7	3.7	5.5	4.3*	9.0*	5.7	7.0	6.1	6.3	1.4	2.3	5.2	5.9	5.1	
Technique	5.5	7.7	3.3	5.5	10**	18.**	6.8	6.9	6.3	6.7	.2		5.6	5.9	4.8	
Teacher's Objective	7.0	8.5	4.3	6.6	4.0*		5.3	7.3	6.4	6.9	2.0	4.1	5.2	6.6	5.3	

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pride (2.5), art quality (4.1*), best use of media (4.1*).

Media motivation was least effective for producing art quality (4.1), emotional expression (3.6*) and intellectual expression (3.3), fulfillment of the teacher's educational objectives (4.1*), unique products, and pride in the product (2.5). Students needed most help both in media (3.0) and theme ideas (3.0), under the media motivation.

Most intellectual expression was attained through the subject matter motivations (5.22*).

C. 4th and 5th Grade--Combination Best, Subject Matter Worst. Fourth and fifth grade students were working most intensely at 20 minutes (10.3**) and 30 minutes (4.5*) on the combination motivations. On combination motivation lessons, they were most involved and had greatest pride in their products (3.18*). On combination motivation lessons, students showed most technical proficiency (18.6**).

Subject matter motivation at the fourth and fifth grade level was the least effective method. The worst use of design principles (9.0*), least technical proficiency (18.6**), least fulfillment of the teacher's educational objectives (4.02*), least intellectual expression (6.5*), and poorest use of media (8.5*) occurred during subject matter motivations.

D. 3rd Grade- Subject Matter Best, Media Worst. At the 3rd grade level, subject matter was found to most intensely involve the students at 10 minutes (4.9*), at 20 minutes (10.6**), and at 30 minutes (5.7*). Subject matter motivation produced greatest involvement (8.6*) and more pride.

The teachers' answers did not reveal any differences regarding the greater effectiveness of one motivation.

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*The F results of the analyses of variance are reported in parentheses after the finding. If it is significant at the .05 level one asterisk follows it; if significant at the .01 level two asterisks follow it; F scores between the most and least effective treatments are given.

E. 2nd Grade- Subject Matter Slightly Better. At the second grade level, subject matter motivation more intensely involved the students after 20 and 30 minutes (5.4*, 7.4*). It also generated more involvement (4.5*), more uniqueness (3.3), more pride (2.5), and more intellectual expression (24.0**). However, media motivation produced greater emotional expression (4.0) and slightly more art quality.

F. 1st Grade. At the first grade level, no one motivation was shown to be superior. Combination motivations resulted in least need for help (2.1) and most intense working after 10 minutes (4.3). Best student questions and the greatest intellectual expression occurred in subject matter motivations (7.2*) and (18.0**).

G. Treatments Effective Across Grades. Pride, uniqueness, involvement, and intellectualizing all favored subject motivation. (F=4.3*, 1.0, 3.0*, 8.4**). This indicates that students were able to put more of themselves into the subject motivations. Indeed, that is frequently the teacher's goal in giving subject motivations; for example, Viktor Lowenfeld's motivations always stressed the importance of the student putting himself and his experiences into his art--in order for greatest creative, personality, and mental growth to take place. This investigation also found that, for all three times (10 minutes, 20 minutes, and 30 minutes) (F's .5, .8, .8) subject motivation was slightly favored, then combination, then media; these differences were not at all significant however.

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*The F results of the analyses of variance are reported in parentheses after the finding. If it is significant at the .05 level one asterisk follows it; if significant at the .01 level two asterisks follow it; F scores between the most and least effective treatments are given.

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SUBJECT MOTIVATION BETTER ON PERSONAL INVOLVEMENT CRITERIA

Criterion	Mean for all Grades			F
	Subject	Combination	Media	
Pride	6.4	6.3	5.6	4.3*
Uniqueness	6.2	5.7	5.8	1.0
Involvement	7.1	6.9	6.4	3.0*
Intellectualizing	6.2	6.0	4.0	8.4**
10 minutes	8.7	8.6	8.3	.5
20 minutes	8.4	8.2	7.8	.8
30 minutes	7.5	7.4	6.9	.8

On the other hand, the study also found a little supporting evidence for those opposed to Lowenfeldian child-centered methods. These experts, such as D'Amico, who lean toward media motivation, felt that "art" was being short-changed in such child-centered, quasi-therapeutic emphases. Subject motivation did tend to be slightly less effective on two criteria, technical proficiency and art quality (F's 2.1, .8).

However, on all of the "art" criteria (use of design principles, use of media, technical proficiency, and art quality), combination motivation was as good, and usually better, than just media motivation alone.

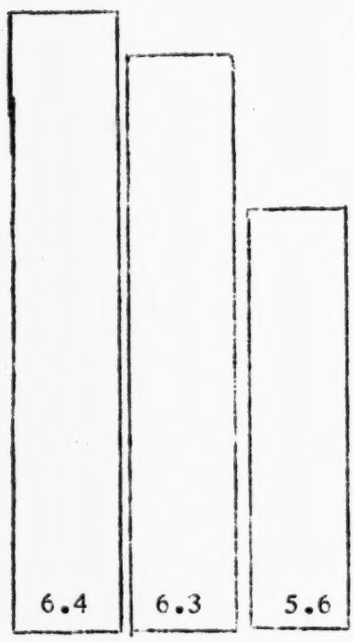
COMBINATION AND MEDIA MOTIVATIONS SLIGHTLY BETTER ON ART CRITERIA

Criterion	Mean for all Grades			F
	Combination	Media	Subject	
Art quality	5.7	5.7	5.3	.8
Technical proficiency	5.9	5.6	4.8	2.1
Use of media	6.3	6.0	5.3	.7
Use of design principles	5.9	5.2	5.2	1.4

Combination motivation, in addition to being slightly most effective on the art criteria, was almost as effective as subject mativation in terms of the seven personal-involvement criteria (see previous chart).

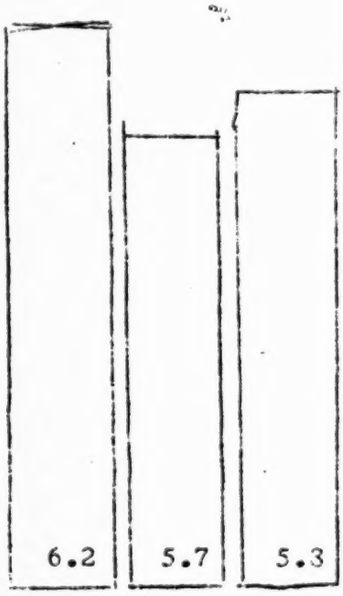
SUBJECT MOTIVATION BETTER ON PERSONAL INVOLVEMENT CRITERIA

PRIDE



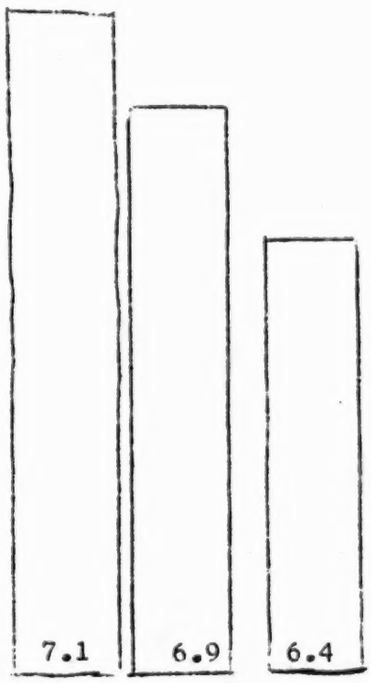
sub. com. med.
students pride in work
sig. at .05

UNIQUENESS



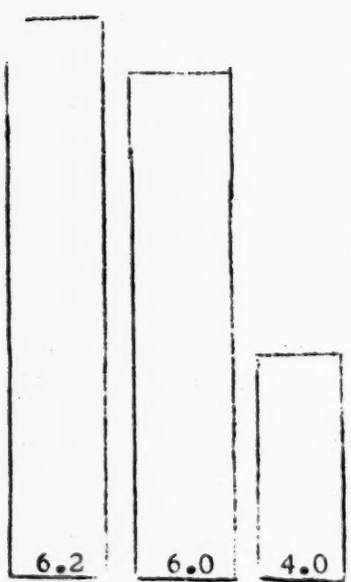
sub. com. med.
uniqueness vs. sameness

INVOLVEMENT



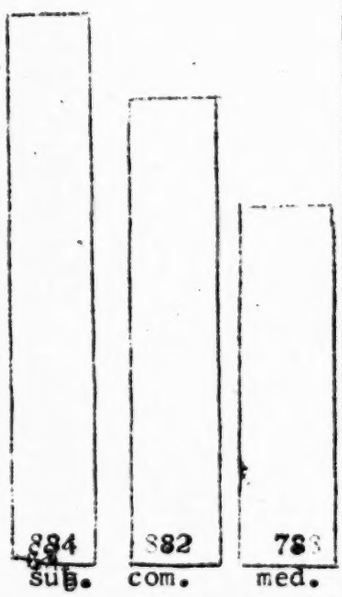
sub. com. med.
involvement with lesson
sig. at .05

INTELLECTUALIZING



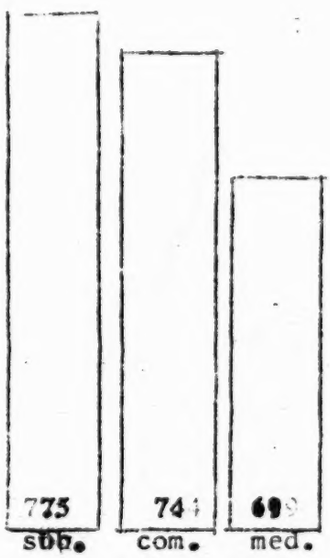
sub. com. med.
amount of intellectualizing
sig. at .01

20 MINUTES



sub. com. med.
per cent of students
deeply engrossed

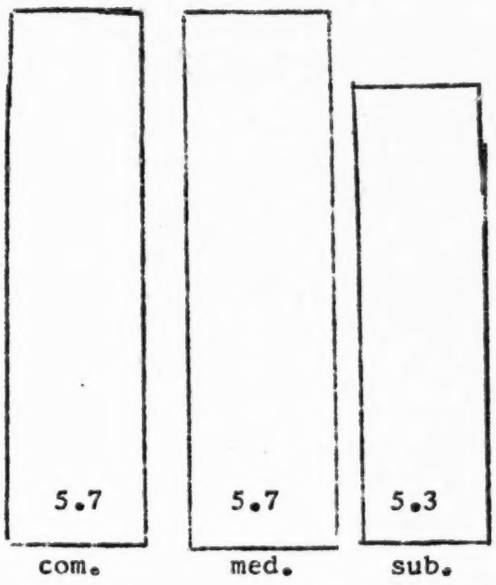
30 MINUTES



sub. com. med.
per cent of sutdents
deeply engrossed

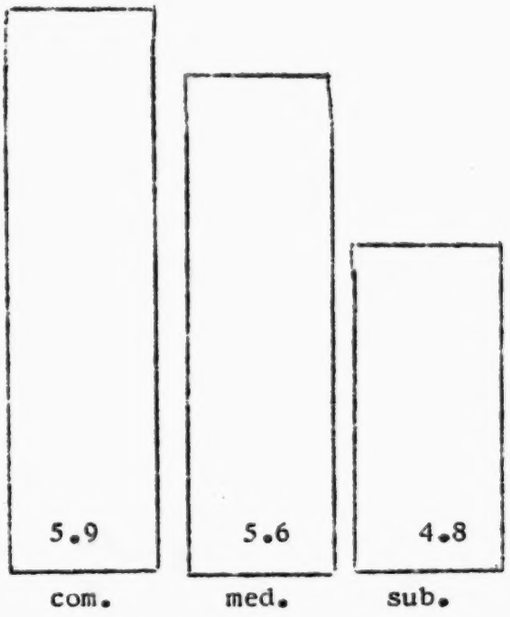
COMBINATION AND MEDIA MOTIVATIONS SLIGHTLY BETTER ON ART CRITERIA

ART QUALITY



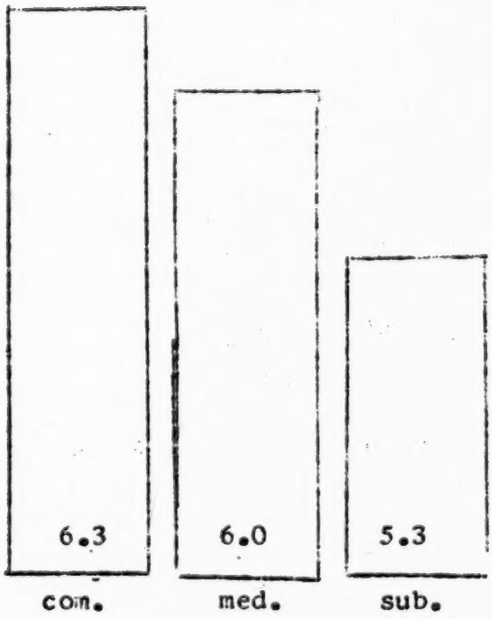
artistic quality of the work

TECHNICAL PROFICIENCY



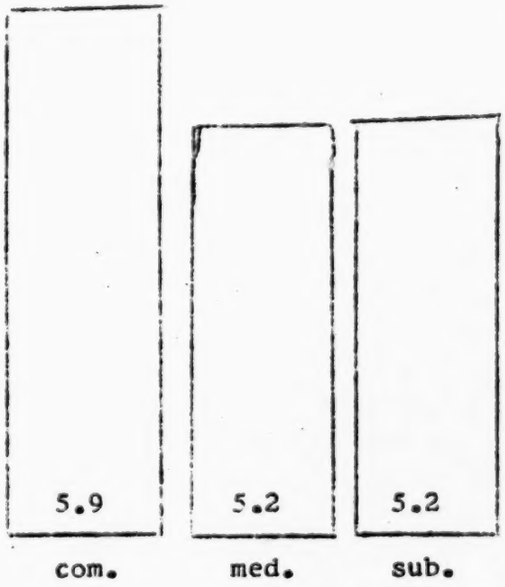
development of technical proficiency

USE OF MEDIA



how well media was used

USE OF DESIGN PRICIPLES



how well design pricinles were used

So, a main recommendation of this study is that, when the art teacher is in doubt as how to motivate, a combination motivation will probably be most effective. Even if a media ("art") idea as the basic goal, the combination motivation would still be suggested.

There are two exceptions to the general recommendation fo combination motivation. If "take home products" are the desired goal (for example, Christmas gifts for Mom and Dad) media motivation is recommended. If personal expression is the desideratum, subject motivation rather than media motivation should be used.

Take home products: Media motivation produced more products which reached home. (chi square significant at .05). The procedure for this phase of the study was as follows; all the childrens' art work was handed back at the end of the year. Phone calls were made that evening to the parents, asking them which art works reached home. Our premise was that children would throw away the art works they did not want their parents to see.

PIECES OF ART WORK WHICH CHILDREN TOOK HOME--CHILDREN IN GRADES 3 TO 6

	Reached home	Didn't reach home
Media	138	80
Combination	113	72
Subject	110	101

x^2 significant at .05 level

One would expect media motivation to result in more presentable products. This was what this study found--that children in grades 3, 4, 5, and 6 did bring more of the media motivated art works home.

IV. DISCUSSION

The preceding chapter, III Results, has described which motivational methods were most and least effective at each grade level, and in general. Chapter V, Conclusions, Implications, and Recommendations, which follows the present chapter, interprets these main results in terms of application for the public school teacher. In a sense, V is the most important chapter, for its recommendations will have most impact on educational change.

The present chapter, IV, contains a discussion of some other results of the study. Findings of lesser interest have been reserved for this chapter, in order that the preceding and following chapters would have greater clarity. While the general reader may not find much of interest here, the following findings may be helpful to another researcher.

A. Grade Level Differences Across Treatments. Which grade levels were most involved, had most pride, greatest art quality, etc.? These findings came out of the two-way analyses of variance. Significant differences at the .05 and .01 levels were found for all the personal involvement criteria (10, 20, 30 minutes working, involvement uniqueness, pride, intellectualizing). This means that, irregardless of which treatment was given, certain grades did better than others. In general, as we might expect, the upper grades did better than the younger grades. This was true for working at 30 minutes, good student questions, uniqueness, and technical proficiency. Younger grades did better on working at 10 minutes, probably due to their shorter, more intense working span.

However, the study was not designed to answer these questions, since different judges, rather than the same judges, judged the different grades. Judges weren't told to judge the students in relation to other students in grades 1 to 6; instead, they were told to judge the students in relation to the students' usual class work.

Yet, the wane and ebb of the criteria at different grade levels did suggest some possible hints for future studies. Many of the criteria were lower in third and sixth grade and high in fourth and fifth grade. It may

be that the dips in third and sixth grades are equivalent to those creativity drops that Torrance found in fourth and seventh grades; the precocity and effects of educational enrichment upon the lab school students might account for the year earlier development.

B. Treatment Across Grades. In addition to the overall advantages of one or another motivation discussed in the previous chapter, significant treatment differences were revealed on two other questions. As would be expected, significant differences (at the .01 level) were found that least subject matter direction was given during media motivation and least media motivation given on subject motivations. This merely shows that, in the observers' judgments, the teachers did give much less media help on the theme motivated lessons and much less theme help on the media motivated lessons. In other words, the teachers were able to administer different treatments.

C. Two-Way Analysis of Variance. Results from grade, treatment, and interaction of grade and treatment are listed in this section. Results of general interest have been presented in the chapter RESULTS. In brief, subject motivations (across grades) were best on personal involvement criteria with combination motivation being almost as effective. Combination and media motivations were most effective on art quality criteria. Results of less general interest were presented in sections A and B of the present chapter, concerning grade differences.

The following table of F scores merely lists all results from the 2-way analysis of variance which were significant at the .05 and .01 levels.

CRITERIA	TREATMENT	GRADE	INTERACTION	CRITERIA	TREATMENT	GRADE	INTERACTION
10 min. work.		2.*		Intellectualize		3.**	3.**
20 min. work.	4.**	2.*	3.*	Emotionalize			
30 min. work.	6.**	3.**	3.**	Art quality			
Need for no help	4.**		2.**	Use of Media			
Need for no help in subject				Design Principles			
Need for no help in media	3.**		2.**	Technical proficiency		3.*	2.*
Student questions	8.**		3.**	Teacher's objective			
Involvement	3.*	2.	2.**				
Uniqueness	7.**		3.**				
Pride	7.**		3.**				

D. Take Home Products at Specific Grade Levels. Media motivation produced more take home products, as was discussed in the previous chapter. However, the disturbing aspect of this finding is that it is directly contrary to the main conclusions of the study. Grade three found subject motivation best and media motivation worst of all other criteria which differentiated, but strangely more of the media motivated works reached home (significant .1). Grade six found combination motivation best and media motivation worst on the other criteria, but more media motivated works were taken home (significant beyond .01). Most strange is the finding in grades four and five in which combination motivation was best and subject motivation worst on several criteria; here, many more subject motivated works were taken home (significant beyond .01).

These strange reversals seem to suggest that take-home products may be a completely different factor, unrelated to personal involvement and art quality. It might suggest that some children are aware of a great difference between their values and those of their parents, feeling that if he (the child) expresses himself in the work, the parent will not like to see the expression. It also brings to mind Getzels' finding--craftsmanship correlating with presented problems, originality correlating with student self-discovered problems. Transposing his findings to this study, it suggests that media motivated craftsmanly projects were taken home, whereas subject motivation's unusual products were too strange or messy to be exhibited to the parents.

PIECES OF ART WORK TAKEN HOME

	3rd GRADE		4th and 5th GRADE		6th GRADE	
	Home	Not Home	Home	Not Home	Home	Not Home
Media	36	12	42	25	60	43
Combination	22	10	41	31	50	31
Subject Matter	26	22	45	10	39	69
	(Favors Media, significant .1)		(Favors Subject, significant .01)		(Favors Media, significant .01)	

E. Pilot Study: A pilot study was conducted before the actual experiment. It consisted of 22 lessons in grades 1, 2, and 3. During this study the treatments and the

measuring instrument were being devised. Only two methods were used, media and experience (subject) motivation.*

Statistical analysis was by t tests between scores on subject and media motivation. As the findings from grades one and two were very similar, the data for the two grades was combined. Grade three's data revealed contrasting findings.

The general conclusion was that grades one and two favored media motivation, whereas grade three favored subject motivation. Bear in mind that in our major experiment, grade three also found subject to be most effective and media least effective. Thus, one half of the findings from the pilot study clearly corroborate the findings of the main experiment. These were also the strongest conclusions of the pilot study, as the many .01 significant differences show (see chart following).

*Two years ago when this project was first being delineated, Viktor Lowenfeld's heavy emphasis on the child's experience as a motivating factor weighed on our minds. The rather extensive degree to which he himself advocated themes in which the child did not actually physically participate in the past experience or imagined event was not realized by the investigators. "How would you feel if you were a Pilgrim's child---a bright color,---an old sick grandmother living in a slum?" Also we were not as aware of the works of Torrance, Getzels, and others which has emphasized the importance of fantasy themes, e.g. "The lion that wouldn't roar." Our thinking on this issue is climaxed in our concurrent U.S.O.E. supported project, "The Relation of Aesthetic Quality to Socio-Economic Variables (Culturally-Advantaged and -Disadvantaged), Motivational Variables (Realism and Fantasy), and Budget Variables (Found vs. Expensive Materials)." Carr and Clements, co-investigators. In this new study, Subject Motivation is split into two types, realism (experience) and fantasy. (Also Media motivation is split into two types, free and costly materials). Therefore, the label "experience" motivation which was used during the pilot study has been changed to the more accurate and educationally meaningful term, "subject" motivation.

However, the major study found no difference among treatments in first grade and mixed conclusions in second grade, in which personal involvement favored subject motivation while art quality tended toward media motivation. In the pilot study, on the other hand, personal involvement criteria (working at 30 minutes), involvement, and need for help criteria (need for help, help in subject) favored media motivation. Thus, the pilot findings from grades one and two did not support the findings of the main experiment. For this reason, the data of the main experiment was interpreted conservatively at grades one and two.

Findings of the pilot study are as follows:

First and second grade results favor media motivations over experience motivations.
Third grade results favor experience motivations over media motivations.

SPECIFIC FINDINGS OF THE PILOT STUDY

(*=sig. at .05; **= sig. at .01*) to scores between treatments

	GRADES 1&2 (all favor media)	GRADE 3 (experience)
Working Intensity at 20 minutes	.5	4.4**
Working Intensity at 30 minutes	1.5	3.9**
Involvement	3.0**	2.1*
Need for No Help	3.1**	3.5**
Need for No Help in Subject idea	1.8	2.3*
Need for No Help in Media	1.4	2.0

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

A. Grade Six. The greater interest in combination and subject motivations in grade six, (at this level, media motivation was least effective) seems to reflect the sixth graders' interest in trying to capture the subject, their concern for pictorial representation, chiaroscuro, perspective, their interest in myths, ghosts, adventure, biography, history.

Erdt emphasized the sixth graders' intellectual strength and his interest in integrated art activities. At this level a unit studies or core curriculum approach is often used. In this study, for example, a sex education discussion was followed by figure drawing, historical study of the Rennaissance was combined with basreliefs.

Lowenfeld, in describing the sixth graders' psuedo-realistic stage, emphasized their social awareness and capacity for self-identification. He suggested lessons in the figure's proportions and motions. Knudsen and Christensen described the students' interest in making objects appear as they actually are. Gaitskell recommended figure drawing, portraits, still-life, landscape drawing, and perspective lessons for the sixth grade level. D'Amico cited their keen interest in the human figure and self portraits. Wachowiak and Ramsay pointed out the students' interest in human activities, the community, and world events, in their environment as a source in perspective, the beginning of a phase of hero worship. Jefferson contrasts the upper elementary child's concern with naturalism to the younger child's interest in direct methods. However, at this level, students often cannot think of a good subject on their own and become self-conscious about the quality of their idea; thus, some subject motivation seems to give them what they need.

This study found media motivation by itself, to be the least effective method in the sixth grade. D'Amico wrote of the upper elementary teacher's plight of being beseiged by children totally uninspired by the art media before them, asking what to do. Erdt states that the problem is to not let techniques dominate the child's thinking.

Perhaps the students want more than just "playing with materials" at this age; maybe anticipating high school and entering puberty, they want to learn more about life, nature, history, and be able to represent it in their art. However, media motivation should certainly not be excluded. This study found the combination motivation (that is, the lesson with both subject and media motivation) was the most effective method. Also, many art educators stress the importance of teaching design principles and new media at this level. Rather, the recommendation of this study is that, at the sixth grade, media motivations should be combined with subject motivations.

B. Grades 4 and 5. This study found combination motivation to be most effective at the fourth and fifth grade levels; media motivation was next and subject motivation was least effective.* Barkan describes the fourth grade as a time children love to tinker and build with a variety of tools and materials. He found construction activities which utilize their manipulative skills are a constant challenge and source of interest. His effective teachers spent time on helping children become aware of specific ways to do art work well. Cole found the comments "Bump the sides" and "Make it your own way," to be effective in the fourth and fifth grades. Erdt found nine year olds enjoy working with new materials, eager to improve skills, and asking many questions about technique. Lowenfeld wrote, concerning the 9-11 year old "gang age," "Getting acquainted with the functions and qualities of materials is the main aim." Linderman and Heberholz suggest, in the years of "beginning realism," 9-12, that teachers provide the child with opportunities to experiment and explore materials, stressing the skillful handling of materials. (Linderman and Heberholz contrast this to motivations for age 4 to 9, of stories, films, animals, plants, people in action.) Thus, this study recommends a variety of media be introduced in the fourth grade, and that motivation, while including subject stimulation, should emphasize ways of working with the materials.

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*Data from fourth and fifth grades was combined for purposes of statistical analysis. Approximately 70 per cent of the data was from fourth grade.

Subject matter motivation was found to be least effective in grades four and five. During the fourth grade, children become aware that they just can't "draw" well enough to suit them, and, for this reason, are not enthused by projects that demand they portray their inadequacy in representing subject matter. Knudsen found that in the fourth grade children begin to feel self-conscious of how they draw and wish they could express themselves more realistically than they are able. In the upper elementary years, Barkan found a sharply reduced security in personal intuitive feelings, a focus on factual accuracy at the expense of imaginative ingenuity. Lowenfeld cited their growing critical awareness. Knudsen found that it is often necessary to redirect the fifth grade child's art expression into imaginative topics since children have overly great expectations for realism, which they discouragingly cannot achieve. Torrance has reported drops in creativity in the fourth grade. It appears that, in terms of art education methods, motivation should emphasize media motivation, which call forth the child's natural interest in manipulation, rather than subject motivation which may embarrass the self-critical child. However, it should be remembered that the most effective motivational method at this level was the combination motivation.

C. Grade Three. At the third grade level, this study found subject motivation most effective, combination next, and media motivation least effective. Art educators appear agreed on the value of subject motivation at this level. Knudsen stated that third grade children are happy to express their feelings through symbolic shapes. Erdt wrote that eight year olds are enthusiastic imaginative participants in dramatic play. Kaufman called the schematic 7 to 9 year period "the most distinctive period of child art, the one that parents gush over...(the child experiences) a natural state of symbolic satisfaction." Lowenfeld emphasized the importance of giving the child the opportunity to use his concepts as living experience; he advocated motivations characterized by the words "we," action (are doing), and "where." Linderman and Heberholz suggested stories, people in action, animals as motivations for the lower elementary grades. It appears that at this age children are happy to portray life around them in their art work. They are proud of their newly found ability to represent things and do not care too much for technical directions.

D. Grade Two. At this grade, subject motivation was slightly better; it produced much student involvement, more uniqueness, pride and intellectual expression, However, media motivation produced greater emotional expression and more art quality. This corroborates exactly Douglas' findings that second graders had more frustration when they were not told what to paint, but that aesthetic growth was greater when they chose their own subject. Barkan called the lower elementary level an age of fantasy, in which children love to dramatize, and engage in highly imaginative play. Wachowiak emphasized their love of make-believe, their creation of their own secret world. He stated that they can only grasp one idea at a time; perhaps, that is why in this study, combination motivation was not found to be superior on any criterion.

E. Grade One. At the first grade level no one motivational method was found to be superior. It appears that these children are interested in trying any media or theme. Any new experience is interesting the first time one tries it. D'Amico wrote, "Up to six years, the child is an instinctive creator, he requires little encouragement and almost no instruction." (From six to ten, D'Amico recommended trips to the zoo, the market, the bakery, the greenhouse, etc.) Erdt wrote that the six year old learns best by using his own initiative. Knudsen described the first grade child's ability to become completely involved.

F. Other Recommendations. This study has found that children tend to be more and less motivated by certain methods at different grade levels. These findings are supported by the writings of other art educators. Of course, these findings should not be applied dogmatically--that only one kind of motivation should be used or that another kind shouldn't be used at a certain grade level. How often educational practices have, pendulum-like, swung from one extreme to the other! As more and more research in teaching methods is conducted, the value of "blending," combining, and using many different methods is made more clear. Too often the baby has been thrown out along with the bath water. However, if this study can reveal some hints regarding what methods may tend to be more or less effective, it will be of value.

SUMMARY

The Effectiveness of Three Motivational Methods (Median, Subject Matter, and Combination Motivations) in an Art Program in the Elementary Grades*

Robert D. Clements, Gerry B. Mendelson, and Pete J. Carr
Ball State University

INTRODUCTION

Problem. How can elementary school children in art class work most effectively motivated by the teacher? Should the teacher usually give a combination motivation -- one which contains both subject matter ideas and discussions of the properties of the media? Is one or the other emphasis more important at certain grade levels; for example, do sixth graders need more media motivation than first graders? Regardless of grade level, is one type to be preferred to reach certain teaching goals? At which grade levels do students respond most enthusiastically to subject matter motivations? This investigation attempts to shed some light on questions such as these.

Objectives. The major objective underlying this study was to determine the relative effectiveness of three methodological approaches to the teaching of art in the elementary school. One of the motivational techniques used was subject matter motivation. Writers such as Lowenfeld feel that one of the most valid forms of art motivation in the elementary grades is that which is based on the past life experiences of the participating child. Art then becomes an expression and vital means of interpreting one's self in conjunction with one's environment through subject matter motivation.

Contrasted to the subject motivated art lesson is the media motivated art lesson, which finds its basis in the rich, beautiful, and varied manipulative possibilities offered by the media. Writers such as Hoover, Johnson, D'Amico, and Erdt are not at all opposed to subject motivation but indicate in their writings a distinct leaning

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*This project was performed under a grant with the U.S. Office of Education, project #s-388.

toward media motivation. These educators tend to feel that the experimentation and direction with the plastic qualities of the art media becomes a major important motivational force for art.

Combination motivation employs both subject and media help. For example, Burkhardt has reported that both subject matter "if" questions and media "how" questions were necessary for art gains. He found suppositional "if" questions necessary for originality of idea; the media "how" questions necessary to develop preparedness.

METHOD

The Measuring Instrument. The goals of this study are to investigate the effectiveness of these methods in the elementary grades. Several criteria have been used; some emphasizing personal involvement, others emphasizing art quality.

The personal involvement criteria include amount of pride, intensity of working behavior at 10, 20, and 30 minutes, amount of intellectual and emotional expression.

The art quality criteria include use of media, use of design principles, overall art quality, development of technical proficiency.

Treatment. The following descriptions give the reader a fuller sense of the manner in which the three types of motivations were used with the same materials. (In order to control for the extraneous variable of different materials, each material was presented in all three types of motivations).

TITLES OF SOME OF THE LESSONS PRESENTED

SERIES	GRADE	SUBJECT MATTER MOTIVATION	MEDIA MOTIVATION	COMBINATION MOTIVATION
WATER-COLOR	6	memory painting of model	dry brush, chiaroscuro	microscope slides, analogous colors
CLAY SCULPTURE	6	clay jewelry-insect themes	furnace cement	Rennaissance themes-bas relief
WATER-COLOR	5	visitors to our class	wet into wet, dry technique	Rennaissance Fresco painting
CRAYON	4	family portait glued masonite say into jigsaw puzzle	limited palette	playground action, value contrast
JEWELRY (GLASS)	4	clay glazed animal pins	Egyptian paste jewelry	plant life cloissonne; enamel on copper
WATER-COLOR	4	famous ghosts	classical watercolor technique	musical instrument still-life, dry brush

Observers. Each lesson presented was evaluated by approximately four observers who were in the classroom watching the students. The observers, who were college juniors preparing to be elementary and art teachers, judged the students on how intensely they were working after 10, 20, and 30 minutes, amount of interest, pride, etc. The art teacher judged his own lesson on questions of an aesthetic nature, which the observers would have found difficult to answer--such as amount of emotional and intellectual expression, use of materials, use of design principles, art quality, and degree to which the lesson fulfilled the teacher's educational objectives.

Design and Analysis. 438 observations were made, of 87 lessons, in 19 classes at two schools. The fourth and fifth grade samples had to be combined. Approximately 90 observations on 17 lessons in four classes were collected at each grade level. Data was analyzed by 140 one-way analysis of variance and 19 two-way analysis of variance.

6th Grade. Combination motivation was most effective and media motivation was least effective on eight criteria which differentiated (intensely working at 30 minutes, emotional expression, uniqueness, pride, art quality, use of media, design, and teacher's educational objectives). (underlining means that the difference was significant at the .05 level).

The greater interest in combination and subject motivations in grade six seems to reflect the sixth graders' interest in trying to capture the subject, their concern for pictorial representation, chiaroscuro, perspective, their interest in myths, ghosts, adventure, biography, and history.

Erdt emphasized the sixth graders' interest in integrated art activities. At this level a unit study or core curriculum approach is often well used. Lowenfeld, in describing the sixth graders' pseudo-realistic stage, emphasized their social awareness and capacity for self-identification. He suggested lessons in the figure's proportions and motions. Gaitskell recommended figure drawing, portraits, still-life, landscape drawing, and perspective lessons for the sixth grade level. D'Amico cited their keen interest in the human figure and self-portraits. Wachowiak and Ramsay pointed out the students' interest in human activities, community and world events, and in perspective. Students seem to need subject motivation at this age when they are self-conscious of their own ideas.

This study found media motivation by itself, to be less effective in the sixth grade. D'Amico writes of the upper elementary teachers' plight of being beseiged by children totally uninspired by the art media before them, asking what to do. Erdt stated that the problem is to not let techniques dominate the child's thinking. Perhaps the students want more than just "playing with materials" at this age; maybe anticipating high school and entering puberty, they want to learn more about life, nature, history, and be able to represent it in their art. However, media motivation should certainly not be excluded.

This study found the combination motivation (that is, the lesson with both subject and media motivation) was the most effective method. Rather, the recommendation of this study is that, at the sixth grade, media motivations should be combined with subject motivations.

Grades 4 and 5. Combination motivation was most effective and subject matter motivation was least effective. The criteria which showed this were: working at 20 and 30 minutes, involvement, pride, technical proficiency, design, teacher's education objectives, intellectual expression, and use of media. Data from the fourth and fifth grades was combined for purposes of statistical analysis. Approximately 70 percent of the data was from fourth grade. Barkan described the fourth grade as a time children love to tinker and build with a variety of tools and materials. He found construction activities which utilize their manipulative skills a constant challenge and source of interest. His effective teachers spent time on helping children become aware of specific ways to do art work well. Erdt found nine-year-olds enjoy working with new materials, eager to improve skills, and asking many questions about technique. Lowenfeld wrote concerning the 9-11-year old "gang age," "Getting acquainted with the functions and qualities of materials is the main aim." Linderman and Heverholy suggest in the "beginning realism" years of 9-12, that teachers provide the child with opportunities to experiment and explore materials, stressing the skillful handling of materials. Thus, this study recommends a variety of media be introduced in the fourth grade, and that motivation, while including subject stimulation, should emphasize ways of working with the materials.

Subject matter motivation was found to be least effective in grades four and five. During the fourth grade, children became aware that they just cannot "draw" well enough to suit them, and for this reason, are not enthused by projects that demand they portray their inadequacy in representing subject matter. Knudsen and Christensen found that in the fourth grade, children begin to feel self-conscious of how they draw and wish they could express themselves more realistically than they are able. In the upper elementary years, Barkan found a sharply reduced security in personal intuitive feelings, a focus on factual accuracy at the expense of imaginative

ingenuity. Lowenfeld cited their growing critical awareness. Knudsen found that it is often necessary to redirect the fifth grade child's art expression into imaginative topics since children have overly great expectations for realism, which they discouragingly cannot achieve. Torrance has reported drops in creativity in the fourth grade. It appears that, in terms of art education methods, motivation should emphasize media motivation, which call forth the child's natural interest in manipulation, rather than subject motivation which may embarrass the self-critical child. However, it should be remembered that the most effective motivational method at this level was the combination motivation.

Grade Three. Subject motivation was most effective, media motivation was least effective. The following criteria showed that working at 10, 20, and 30 minutes, involvement, and pride. Art educators appear agreed on the value of subject motivation at this level. Kaufman called the schematic seven to nine year period the "most distinctive period of child art, the one that parents gush over. (The child experiences a natural state of symbolic satisfaction)." Lowenfeld advocated motivations characterized by the words "we" are doing (action) and "where". Linderman and Heberholy suggested stories, people in action, and animals as motivations for the lower elementary grades. It appears that at this age, children are happy to portray life around them in their art work. They are proud of their newly found ability to represent things and do not care too much for technical directions.

Grade Two. At this grade, subject motivation was slightly better; it produced much student involvement, more uniqueness, pride, work at 20 and 30 minutes, and intellectual expression. However, media motivation produced greater emotional expression and more art quality. This corroborates exactly Douglas' findings that second graders had more frustration when they were not told what to paint, but that aesthetic growth was greater when they chose their own subject. Barkan called the lower elementary level an age of fantasy, in which children love to dramatize and engage in highly imaginative play. Wachowiak and Ramsay emphasize their love of make-believe, their creation of their own secret world. They stated that the children can only grasp one idea at a time; perhaps, that is why, in this study, combination motivation was not found to be superior on any criterion.

Grade One. At the first grade level, no one motivational method was found to be superior. It appears that these children are interested in trying any media or theme. Any new experience is interesting the first time it is tried. D'Amico wrote, "Up to six years, the child is an instinctive creator, he requires little encouragement and almost no instruction." (From six to ten D'Amico recommended trips to the zoo, the market, the bakery, the greenhouse, etc.) Erdt wrote that the six-year-old learns best by using his own initiative.

Other Findings and Conclusions. Across grade levels, subject motivation produced greater pride, uniqueness, involvement, and intellectualizing. Media motivation was least effective for promoting these personal involvement criteria. Thus, if the teacher, generally is seeking projects to personally involve the child, he may find subject and combination motivations more effective than media motivation.

However, if the teacher is seeking aesthetic quality in the works, he may find combination and media motivations to be slightly less effective on art quality, technical proficiency, use of media, and use of design principles. Media motivation produced more products which the children took home. (Thus, if Christmas presents for Mom is the desideratum, media motivation is recommended.)

In general, disregarding the specific advantages of subject and media motivations, combination motivation was as or more effective than either subject or media motivation alone. Thus, if a teacher is in doubt as to how to motivate, a combination motivation may probably be most effective.

U.S. OFFICE OF EDUCATION PROJECT 292

Effectiveness of three Methodological Approaches (subject matter, media, and combination motivations) in the Elementary School Art Program. Robert Clements, Gerry Mendelson, and Mona Lokey.

Your name Lesson No. Classroom Teacher's name Grade Date

1. After 10 minutes of working time the following percent of students seemed to be deeply engrossed.

10 20 30 40 50 60 70 80 90 100

2. After 20 minutes of working time the following percent of students seemed to be deeply engrossed.

10 20 30 40 50 60 70 80 90 100

3. After 30 minutes of working time the following percent of students seemed to be deeply engrossed.

10 20 30 40 50 60 70 80 90 100

4. During this project the students' need for help of any kind was

Very great	Great	Def. above av.	Slightly above av.	Slightly below av.	Def. below av.	Small	Very small	Next to nothing	Nil
1	2	3	4	5	6	7	8	9	10

5. The students' need for help in subject matter ideas was

Very great	Great	Def. above av.	Slightly above av.	Slightly below av.	Def. below av.	Small	Very small	Next to nothing	Nil
1	2	3	4	5	6	7	8	9	10

6. The students' need for help in material manipulation was

Very great	Great	Def. above av.	Slightly above av.	Slightly below av.	Def. below av.	Small	Very small	Next to nothing	Nil
1	2	3	4	5	6	7	8	9	10

7. The amount of teacher media direction was

Very great	Great	Def. above av.	Slightly above av.	Slightly below av.	Def. below av.	Small	Very small	Next to nothing	Nil
1	2	3	4	5	6	7	8	9	10

8. The amount of teacher subject matter direction was

Very great	Great	Def. above av.	Slightly above av.	Slightly below av.	Def. below av.	Small	Very small	Next to nothing	Nil
1	2	3	4	5	6	7	8	9	10

9. The extent to which the questions which the students asked showed a struggle with important problems was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Great	Very great	Extremely great	Def. above av.
1	2	3	4	5	6	7	8	9

Remarkably, fantastically unbelievably great
10

10. The student involvement, considering the lesson as a whole was

Minimum involvement	Poor	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Good	Excellent	Extremely excellent
1	2	3	4	5	6	7	8	9

Remarkably unbelievably great	Fantastically great
10	

11. How much uniqueness and individuality as opposed to sameness and copying appeared in the art work of the class

An extremely great amount of copying	A lot of sameness and copying	Much sameness & a little uniqueness	Def. more sameness than uniqueness	Slightly more sameness than uniqueness
1	2	3	4	5

Slightly more uniqueness than sameness	Def. more uniqueness than sameness	Much uniqueness and a little sameness	A lot of uniqueness and originality	An extremely great amount of uniqueness and originality
6	7	8	9	10

12. The students' pride in their own work was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Great	Very great	Extremely great
1	2	3	4	5	6	7	8	9

Remarkably unbelievably great	Fantastically great
10	

ART TEACHER SHEET

U.S. Office of Education Research Project 292. Effectiveness of Three Methodological Approaches (Subject Matter, Media and Combination Motivations) in the Elementary School Art Program. Bob Clements, Gerry Mendelson, Pete Carr, and Mona Lokey.

Your Name | Lesson No. | Classroom Teacher's Name | Grade | Date

1. The amount of intellectualizing was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Great	Very great	Extremely great
1	2	3	4	5	6	7	8	9

Remarkably, fantastically unbelievably great
10

2. The amount of their own emotions which the students expressed in their work was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Great	Very great	Extremely great
1	2	3	4	5	6	7	8	9

Remarkably, fantastically unbelievably great
10

3. The overall artistic quality of the work was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Great	Very great	Extremely great
1	2	3	4	5	6	7	8	9

Remarkably, fantastically unbelievably great
10

4. The media was used

Terribly	Very poorly	Poorly	Def. less well than average	Slightly less well than av.	Slightly better than average	Def. better than av.	Very well	Extremely well
1	2	3	4	5	6	7	8	9

Remarkably fantastically well
10

5. Design Principles were used

Terribly	Very poorly	Poorly	Def. less well than average	Slightly less well than av.	Slightly better than average	Def. better than av.	Very well	Extremely well
1	2	3	4	5	6	7	8	9

Remarkably fantastically well
10

6. The development of technical proficiency was

Very small	Small	Def. below av.	Slightly below av.	Slightly above av.	Def. above av.	Great	Very great	Extremely great	Remarkably, fantastically unbelievably great
1	2	3	4	5	6	7	8	9	10

7. This approach in this media promoted my general education objectives

Terribly	Very poorly	Poorly	Def. less well than average	Slightly less well than average	Slightly better than average	Def. better than average
1	2	3	4	5	6	7

Very well	Extremely well	Remarkably	fantastically well
8	9	10	

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